CLAIMS

1. A recombinant gene functional in a plant, comprising a disrupter gene encoding a product capable of disrupting cell function said disrupter gene being functionally linked to and controlled by an externally regulatable gene control region which includes a promoter which is inducible by the external application of a chemical inducer.

2. A recombinant gene functional in a plant, as claimed in claim 1, in which the said inducible promoter is functionally linked to and controls a repressor protein gene and in which the disrupter gene promoter includes an operator sequence recognised by the said repressor protein, so that in the presence of the inducer the repressor protein is produced which interacts with the operator sequence disabling the second promoter and inhibiting expression of the disrupter gene.

3. A recombinant gene functional in a plant, as claimed in claim 2, in which the disrupter protein encodes a cytotoxin which disrupts cell function, leading to cell death.

4. A recombinant gene functional in a plant, as claimed in claim 2, in which the disrupter gene encodes a recombinase adapated to excise a nucleotide sequence flanked by recombinase recognition sequences.

5. A recombinant gene functional in a plant, as claimed in claim 2, in which the disrupter gene is a nucleotide sequence adapted to inhibit an endogenous plant gene which is essential to plant development or a gene conferring a desired characteristic on the plant.

6. A recombinant gene functional in a plant, as claimed in claim 5, in which said nucleotide sequence is in antisense orientation to the gene to be inhibited or comprises a partial sequence of the gene to be inhibited in sense orientation.

7. A recombinant gene functional in a plant, as claimed in claim 4 or 5 or 6, in which the gene to be inhibited or excised is an endogenous plant gene essential to seed germination or early seedling development.

8. A recombinant gene functional in a plant, as claimed in claim 7, in which the gene to be inhibited or excised is an α-amylase gene.

9. A recombinant gene functional in a plant, as claimed in claim 1, in which the promoter of the disrupter gene is a promoter normally active at a selected plant development stage.

10. A recombinant gene functional in a plant, as claimed in claim 9, in which the said promoter is the promoter of a gene normally active during germination or early seedling development.

11. A recombinant gene functional in a plant, as claimed in claim 10, in which the said promoter is the promoter of the malate synthase gene.

12. A recombinant gene functional in a plant, as claimed in claim 10, in which the said promoter is the promoter of the germin gene.

13. A recombinant gene functional in a plant, as claimed in claim 10, in which the said promoter is selected from the group consisting of ~~the gene~~ promoters of glyoxysomal enzyme genes, aleurone layer genes, and carboxypeptidase genes.

14. A recombinant gene functional in a plant, as claimed in claim 4, in which the recombinase gene is the FLP gene of the 2 micron plasmid of Saccharomyces cerevisiae and the recognition sequences are the FRT sequences which flank all or part of an inserted gene or its regulatory elements.

15. A recombinant gene functional in a plant, as claimed in claim 4, in which the recombinase gene is the Cre gene of bacteriophage P1 and

its recognition sequences are the lox sequences which flank all or part of an inserted gene or its regulatory elements.

16. A recombinant gene functional in a plant, as claimed in claim 4, in which the recombinase gene is the Activator transposase of Zea mays.

17. A recombinant gene functional in a plant, as claimed in claim 1, in which the inducible promoter is the promoter of the gene encoding the 27 kd protein of glutathione-S-transferase II.

18. A recombinant gene functional in a plant, as claimed in claim 1, in which the said gene control region includes the promoter of the AlcA gene and also a gene capable of expressing the AlcR protein, alcA and alcR being obtainable from Aspergillus.

19. A recombinant gene functional in a plant, as claimed in claim 2, in which the repressor protein gene encodes the lac repressor or a repressor used by 434, P22 or lambda-bacteriophages.

20. A recombinant gene functional in a plant, as claimed in claim 2, in which the repressor protein is the tet repressor.

21. A recombinant gene functional in a plant, as claimed in claim 1, in which the disrupter gene encodes barnase and the said gene control region contains the coding region of the barstar gene which on expression produces a protein inhibitor of barnase.

22. A recombinant plant genome comprising a recombinant gene as claimed in any of the preceding claims.

23. A plant, seed plant part or plant cell having a recombinant genome as claimed in claim 22.

24. Protected plant germplasm comprising a plant comprising a gene capable of inhibiting development of the plant beyond a selected developmental stage and a regulatable gene control region which on application of an inducer external to the plant is adapted to overcome the inhibitory effect of the development inhibiting gene.

25. A plant or seed which is incapable of growing to maturity comprising a genome which includes a genetic inhibitor of seed germination or plant development, the activity of said inhibitor being under control of an externally inducible gene regulatory sequence.

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